preserved in the collection of the Zoological Museum of the Imperial Academy of Sciences at St. Petersburg, and from a specimen in the collection of the Royal Zoological Museum at Florence *.

V.—*Descriptions of new Pectinicorn Coleoptera.*

By Charles O. Waterhouse.

Having recently been engaged in incorporating numerous accessions to the Pectinicorn Coleoptera in the British Museum, I have found several species which do not appear to be described and which I have made the subject of this paper, adding to them a most interesting species of the genus *Lucanus*, kindly lent to me for description by Mr. A. Fry.

Lucanidæ.

Lucaninæ.

Lucanus laminifer.

♂ *var. max.* Piceo-niger, æneseens, griseo-pubeseens, nitidus. Mandibulis capite cum thorace duplo longioribus, antice fortiter deflexis, intus dentibus parvis numerosis, basi supra dente acuto introrsum directo armatis, apice incurvatis bifidis. Capite antice concavo, supra laminis tribus erectis ornato; clypeo acuminato, supra lamina transversa instructo. Thorace convexo, crebre subtiliter punctulato, lateribus medio leviter sinuatis. Elytris thorace latioribus, crebre subtiliter punctulatis. Femoribus rufo-maculatis. Tibiis anticis quinque-spinosis, apice bifurcatis; intermediis 3- vel 4-spinosis; posticis bispinosis.

Long. corp. 23 lin., mandib. 17 lin.

♂ *var. minor.* Mandibulis capite dimidio longioribus, arcuatis, ante apicem dentibus duobus armatis, apice furcatis. Capite antice lamina parum elevata instructo; clypeo lamina nulla; ceteris ut in *L. Westermanni*. Pedibus minus acute spinosis; femoribus obsolete maculatis.

Long. corp. 17 lin., mandib. 5 lin.

♀. Sat elongatus, angustus. Capite crebre rugoso. Thorace disco subtiliter parce punctulato, lateribus crebre sat fortiter punctatis, ante basin oblique excisis. Femoribus immaculatis; tibiis anticis obtuse dentatis.

Long. 15, lat. 6 lin.

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* See Giglioli and Salvadori, Proc. Zool. Soc. 1887, p. 581.

Hab. Assam, Munipur, 6000 feet (*Wm. Doherty, Esq.*). Coll. A. Fry.

This species is nearest to *L. maculifemoratus*. The largest form is quite unlike any other species, and the long deflexed mandibles somewhat resemble those of *Cladognathus inclinatus*, having on the inner side about eighteen or twenty small teeth, with a rather larger one at the middle. On the top of the head are three large erect laminæ, one in front, as in *L. maculifemoratus*, but larger and arched at the top, and two others (representing the usual posterior crest), wider than the anterior one, slightly oblique, arched at the top, with the outer angle produced.

The smaller male closely resembles *L. Westermanni*, but is distinguished by the mandibles having two teeth in front of the middle (instead of one) before the apical fork.

The female resembles that of *L. maculifemoratus* in its elongate narrow form, but is not quite so long, has the thorax more parallel at the middle of the sides, more strongly sinuate before the posterior angles, and with the disk almost smooth. The anterior tibiæ are nearly as in *L. maculifemoratus*, with three or four teeth besides the terminal one, and with the apex not very much produced.

I am indebted to Mr. Fry for the opportunity of describing this very interesting species.

Prosopocœlus Hanningtoni.

♂. Niger, subsurdus, thoracis disco elytrorumque sutura nitidis. Mandibulis capite paulo longioribus, intus tuberculis tribus distantibus instructis. Capite longitudine duplo latiore, antice lunato, pone oculos tuberculo parvo obtuso instructo; clypeo producto. Thorace transverso, subtiliter dense granuloso, lateribus fere parallelis, ante basin oblique fere recte truncatis. Elytris creberrime evidenter punctulatis.

Long. (mand. incl.) 18 lin., ♂ var. med.

♀. Niger, nitidus. Capite fortiter punctato. Thorace subtiliter punctulato, ad latera fortius punctato, lateribus antice et postice rotundatis. Elytris nitidis, subtiliter punctulatis, lateribus surdis, crebrius punctatis, punctis majoribus.

Long. 12 lin.

Hab. East Africa, Forests of Tiveta (*Bishop Hannington*).

This species is very near to *P. senegalensis*, but is broader and less convex; the head has the sides more parallel, the tubercle behind the eyes being more prominent; the surface behind the eye is more distinctly punctured. The epistome

is produced into a tooth which is more prominent than in allied species. The mandibles are less flat than in *P. senegalensis*, with a small tubercle on the inner margin near the base; a larger one in the middle, and a third near the apex; and between this and the apex may be seen two very small tubercles. The thorax has the oblique part at the posterior angles almost straight, and not sinuate as in *P. senegalensis*. The elytra are very similar, but flatter and less narrowed at the base, moderately closely and distinctly punctured, but towards the sides the punctures are inconspicuous, on account of the very dull surface. The mentum is broader, more concave, and less punctured than in *P. senegalensis*.

Three specimens of this interesting species were received from the late lamented Bishop Hannington.

Metopodontus asteriscus, Th.

This species is considered in Parry's Catalogues of Lucanidæ as synonymous with *M. occipitalis*. In the British-Museum collection there are several female examples from Borneo which agree with M. Thomson's description of *M. asteriscus*, and they all differ from the female examples of *M. occipitalis* from the Philippine Islands in being less shining, and much more strongly punctured, and in having the black at the suture of the elytra narrower. If I am correct in identifying these Bornean specimens with *M. asteriscus*, there can be little doubt that it should be considered a distinct species from *M. occipitalis*.

Metopodontus Rœpstorffi.

Piceo-flavus, nitidus. Capitis lateribus, mandibulis plus minusve, thorace maculis tribus, elytrorumque sutura nigris. Corpore subtus pedibusque nigro ornatis.

♂ *var. min.* Long. (mand. incl.) 13 lin.

♀. Long. 11½ lin.

Hab. Andaman Islands (*Rœpstorff*).

This is very close to *M. occipitalis*, but I think may well receive a distinctive name. The mandibles of the male are as long as the head, pluridentate. The head is rather narrow, semicircularly emarginate in front, rather straight at the sides, with a small tubercle behind the eye. Two oblique brown marks above indicate the ridges of the larger varieties. The thorax is densely granular and sparingly punctured, gently arcuate at the sides. The elytra are moderately closely and very distinctly punctured; the black at the suture is lanceo-

late in outline, very narrow towards the scutellum and at the extreme apex.

♀. This resembles the female of *M. occipitalis*, but is more strongly punctured throughout, the punctuation at the sides of the thorax (and especially at the anterior angles) being coarse and crowded together, whereas in *M. occipitalis* the punctures are separated from each other. The spot on the disk is large, and in one specimen extends from the base to the anterior margin. The elytra have the black at the suture very broad at the middle (about 2 lines in width), gradually narrowed to the scutellum and apex.

Dorcinæ.

Ægus Rœpstorffi.

Æ. acuminato affinis et similis. Piceo-niger.

♂ *var. maxima*. Sat nitidus. Mandibulis capite longioribus, arcuatis, depressiusculis, basi dente valido, medio dente parvo instructis. Capite thoraceque minus nitidis. Elytris fortiter punctato-striatis, interstitiis parce subtilissime punctulatis, marginibus rugoso-punctatis.

Long. (mand. incl.) 14½ lin.

♂ *var. minor*. Mandibulis medio dente nullo. Capite thoraceque fortiter punctatis. Elytris interstitiis crebre sat fortiter punctatis.

Long. (mand. incl.) 8 lin.

♀. Capite thoraceque crebre fortiter rugoso-punctatis, hoc lateribus arcuatis, ante basin oblique sinuatis. Elytris striatis, interstitiis crebre fortiter seriatim punctatis; lateribus leviter arcuatis.

Long. 7–9 lin.

Hab. Andaman Islands (*Rœpstorff*).

This species is very similar to *Æ. acuminatus*. The large males may at once be distinguished by the position of the tooth at the middle of the inner margin of the mandibles. The punctures on the thorax are rather larger. The elytra have the striæ more strongly punctured, but the margin has only a narrow border of very strong punctuation. The smaller males with simple mandibles have the head and thorax more strongly punctured than the females of *Æ. acuminatus*.

Ægus Curtisii.

♂. Nigro-fuscus, parum nitidus, subtus rufo-piceus. Mandibulis capite paulo longioribus, ad apicem arcuatis, basi dente sat valido acuminato, medio supra dente minore instructis. Capite sat opaco, antice trisinuato, subtiliter sat crebre punctulato, genis

pone oculos productis. Thorace brevi, sat opaco, subtiliter sat crebre punctulato, lateribus leviter bisinuatis, fulvo fimbriatis, angulis posticis late rotundatis. Elytris sat fortiter striatis, sat crebre subtiliter punctatis, striis obsolete punctatis, marginibus ferrugineo-tinctis, fulvo fimbriatis. Pedibus fulvo-testaceo-hirsutis.

Long. (mand. incl.) $10\frac{1}{2}$ lin.

Hab. Sumatra (*C. Curtis*).

This species might at first sight be supposed to be allied to *Æ. lævicollis* or *Æ. Eschscholtzi*, but in reality is nearest to *Æ. amictus*. The head and thorax have the punctuation very fine and uniform. The thorax has the sides at the anterior angles impressed. The punctuation of the elytra is fine, but not so fine as on the thorax; at the sides the punctures are rather stronger and crowded.

Ægus Parryi.

Piceus, nitidus.

♂ *var. max.* Capite magno, opaco; mandibulis capitis longitudine perpaulo brevioribus, intus prope basin dente valido angulato armatis. Thorace postice perpaulo angustato, discrete punctato, lateribus fulvo fimbriatis, angulis posticis oblique truncatis. Elytris striatis, striis obsolete punctatis, interstitiis 1°–8^{m} lævibus, marginalibus parce punctulatis. Pedibus hirsutis.

Long. (mand. incl.) 8 lin.

♂ *var. min.* Capite minore, ad latera sat fortiter punctato. Mandibulis basi dente acuto armatis. Thorace sat fortiter punctato, lateribus medio fere parallelis.

Long. (mand. incl.) 4–$4\frac{1}{2}$ lin.

♀. Capite thoraceque sat fortiter punctatis, hoc lateribus arcuatis.

Long. 5 lin.

Hab. Borneo, Sarawak.

This species is very near *Æ. glaber*, but is distinguished from that and allied species by the sparse punctuation and smooth elytra, these latter being impunctate even in the female, except the two lateral interstices. The large males are remarkable for the size of the head. The largest male has the strong tooth at the base of the mandible angulated anteriorly, with a deep narrow incision in front of it. A rather smaller example has this tooth acuminate, with an emargination on the inner margin of the mandible in front of the tooth, and between this emargination and the apex the mandible is somewhat dilated.

Ægus Woodfordi.

Fusco-niger, sat nitidus.

♂ *var. minor*? Capite crebre fortiter punctato. Mandibulis sat depressis, capite vix longioribus, acuminatis, perpaulo arcuatis, basi intus dente brevi bilobo, medio tuberculo obtuso vix conspicuo armatis. Thorace capite paulo latiore, leviter convexo, crebre fortiter punctato (disco in medio lævi) antice parum angustato, angulis posticis oblique late rotundatis. Elytris leviter convexis, striatis, interstitiis sat crebre evidenter punctatis, basi lateribusque creberrime fortiter punctatis.

Long. (mand. incl.) 9 lin.

♀. Capite confertim fortiter punctato. Thorace antice paulo angustato, crebre fortiter punctato, lateribus vix arcuatis, serrulatis, confertim punctatis, angulis posticis oblique truncatis. Elytris basi thorace angustioribus, postice paulo ampliatis, convexis, tenuiter striatis, creberrime sat fortiter punctatis.

Long. $7\frac{1}{2}$ lin.

Hab. Solomon Islands, Alu (*C. M. Woodford, Esq.*).

This species is quite unlike any with which I am acquainted. The comparatively straight acuminate mandibles have a double short tooth at the base, with a trace of another at the middle. The elytra are striated, with the third and fifth interstices very narrow, distinctly and moderately closely punctured, more strongly punctured beyond the seventh stria, the base and the margins rugose. The margins are beset with very short hairs, which are slightly separated from each other.

Figulinæ.

Nigidius divergens.

Niger, nitidus. Capite antice leviter concavo, confertim punctato, oculorum canthis retrorsum directis, divergentibus, acutis. Thorace bene convexo, supra parce subtiliter punctato, ad latera sat fortiter punctato; margine antico fortiter impresso, creberrime rugoso punctato, linea brevi mediana elevata instructo; disco medio linea fortiter punctata impresso, ante medium utrinque fovea impresso; lateribus subparallelis, pone angulos anticos incisura parva. Elytris sulcatis, sulcis fortiter punctatis, interstitiis costiformibus lævibus.

Long. (mand. excl.) $10\frac{1}{2}$ lin.

Hab. Lake Nyassa (*Thelwall*).

Very near *N. bubalus*. The mandibles as in that species; very closely and coarsely punctured on the inner side of the erect horn, which has the tip turned in nearly at right angles

and obtuse. The head is closely punctured with large punctures, with a smooth spot behind each mandible, and a dull bare patch on the vertex. The ocular canthus is large, acuminate, directed outwards and backwards; between the canthus and the base of the mandible are two nearly equal swellings in the margin. The thorax has the anterior border coarsely punctured, as in *N. bubalus*, but this border is much broader. The stronger punctuation at the sides does not extend on to the disk, so that it is not visible from above. There is a distinct small triangular emargination just behind the anterior angles. The sulci of the elytra have a series of rather large punctures, with a line of fine punctures on each side on the sides of the intervening costæ.

Nigidius Welwitschii.

Niger, nitidus. Capite creberrime punctato, lateribus antice parallelis, oculorum canthis arcuatis, postice acutis. Thorace transverso, disco antice subtrilobato, subtiliter parce punctulato, margine antico et impressione discoidali fortiter punctatis; lateribus fere parallelis, fortiter punctatis. Elytris sulcatis, sulcis fortiter punctatis, interstitiis lateralibus costiformibus.
Long. $5\frac{2}{3}$ lin.

Hab. Angola (*Welwitsch*).

The mandibles are rather small, closely punctured, with the horn short and curved. The head is coarsely and closely punctured, the sides in front nearly straight, with a slight dentiform projection just before the anterior angle; the canthus is arcuate, acute posteriorly. The thorax has the anterior part of the disk trilobate, the border strongly punctured; the sides straight, strongly angular before the posterior oblique truncature; rather strongly punctured, the punctures rather near together, crowded together near the front angles at a spot a little removed from the margin. The elytra are sulcate, the sulci strongly punctured, but the punctures in the first and second sulci are smaller; on each side of the median line of punctures there is a line of fine punctures. The first and second interstices are not much raised, the others are costiform.

This species is very near *N. nitidus*, Th., but has the head of a different form.